

REMARKS

Claims 9, 20, and 21 have been canceled. Claims 1-3, 12-14, 17, and 19 have been amended. Claims 22-26 have been added. The application now includes claims 1-8, 10-19, and 22-26. The Commissioner is authorized to charge attorney's deposit account for the additional total claims and addition independent claims (the undersigned computes the case has having 2 additional total claims and one addition independent claim).

Claim 1 has been amended to require that the volume of a layer formed by the fire-protection agent is increased by at least 500% in volume upon heating. Support for this amendment can be found on page 5 at line 29.

Amendments have been entered to address issues raised in the rejection of claims 1-21 under 35 U.S.C. 112, second paragraph.

With regard to claim 1, page 5 of the application at lines 12 and 22 respectively reference a variety of ceramic forming additives and volume forming additives. As explained on page 5, line 25, the volume formers essentially act as blowing agents. Furthermore, claim 1 has been amended to require a specific volumetric increase for a layer formed by the fire protection agent. In addition, page 6 of the application indicates that the ceramic forming additives form a ceramic coat or ceramic layer.

With regard to claim 2, the text beginning with "especially" has been eliminated. Claims 9, 20, and 21 have been canceled, making the rejection of these claims moot. With regard to claim 12, the claim has been revised to require that the ceramic forming additives and volume formers are present as salts. With regard to claim 13, the explanation set forth above with respect to claim 1 is applicable. With regard to claim 14, claims 13 and 14 have been amended to provide proper antecedent basis in claim 14. With regard to claim 19, the claim has been revised to be focused on the protection agent. This revision also addresses the rejection of claim 19 under 35 U.S.C. 101.

Claims 1, 3-6, 8, 10, 13-15, and 19-21 have been rejected as being anticipated by U.S. Patent 6,251,961 to Ping. This rejection is traversed. Ping does not show or describe any ceramic forming additive.

Claims 1-5, 8-10, 13-15, and 19-21 have been rejected as being anticipated

by U.S. Patent 6,620,349 to Lopez. Claims 1-21 were rejected as being anticipated by European Patent Specification EP 878520. Both these rejections are traversed. Neither reference shows or describes the use of a volume former. The melamin resin described in Lopez does not allow volume formation whereby in the event of heating the volume of the layer formed by the fire protection agent is increased at least 500% in volume.

Claims 1-6, 8, 10, 13-15, and 19-21 were rejected as being anticipated by U.S. Patent 5,749,948 to Scholz. This rejection is traversed. Scholz does not disclose a fire protection agent for materials comprising ceramic forming additives and volume formers where the volume of a layer formed by the fire protection agent increases at least 500% in volume. Rather, Scholz relates to the application of a system of acrylate resin on steel.

Claims 1-8, 10, 13-15, and 19-21 were rejected as being anticipated by U.S. Patent Publication 2004/0110870 to Liu. Claims 1-8, 10, 13-15, and 19-21 were rejected as being anticipated by either of U.S. Patent 4,879,320 to Hastings or U.S. Patent 4,965,296 to Hastings. These rejections are traversed as none of the references teach a fire protection agent whereby in the event of heating, the volume of the layer formed by the fire protection agent is increased by at least 500% in volume. This increase in volume taught only by the applicant establishes a sufficient fire protection capacity.

This is particularly true in the case where the material being protected against fire is wood. A fire protection agent for wood must fulfill the requirements, particularly in view of temperature. Namely, wood cannot be heated above 100°C, otherwise pyrolysis of wood will take place. Thus, the formation of a fire protecting layer must start at temperatures above 100°C. That is, the formation of the ceramic layer would not require temperatures in the range of the sintering temperature of the ceramic as is discussed in EP 878520.

Since none of the cited documents teach or suggest a fire protection agent for materials that would have the specific property of increasing the volume in the event of heating by at least 500% in volume, none of the claims would be anticipated or obvious over any of the references alone or in combination.

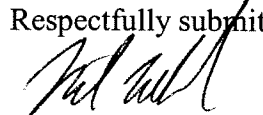
In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 1-8, 10-19, and 22-26 be allowed, and that the

application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael E. Whitham", is written over the typed name.

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